ALEXANDRE CARMINOT

Engineering Student - Machine Learning & Medical Engineering

+33 6 76 89 52 95 @ alexandre.carminot@outlook.com

EDUCATION

Master - Medical Engineering 09/2019 - Present
EPF Engineering School Paris Expected Graduation in 2025

- Problem-solving, analytical and critical thinking, medical engineering principles, programming, device design.

Computer Science - Exchange Program 09/2024 - Present
Tianjin University

- Algorithmic programming, machine learning , computer vision, applied data science

Intelligent Medical Engineering - Exchange Program 09/2023 - 01/2024
Tianjin University

- Precision medicine, neurosciences, brain-computer interfaces (BCI), medical imaging basics, fundamentals of medical engineering.

SPECIALIZATION COURSES

Deep Learning and Advanced Tensorflow
DeepLearning.AI

Advanced Machine Learning on Google Cloud
Google

Advanced Medical Neuroscience
Duke University

Machine Learning Specialization
Stanford University & DeepLearning.AI

PROJECTS

BCI application - In Progress
Developing a BCI simulator to interpret various EEG and MEG signals to enable real-time virtual control based on user thought patterns.

- Using datasets for muscle movement, arithmetic, and thought recognition to classify user thought-based actions in real-time control applications
- Goal : Extract the "thoughts" and actions of the subjects to link it to various controls.

BCI Workshop - Tianjin University
Hand Movement Recognition (MATLAB)

- Developed and deployed a real-time hand gesture recognition system using flexion sensors and AI, classifying six unique static and dynamic patterns with pattern recognition algorithms. Demonstrated successful identification with 98% accuracy.

Disease Prediction Algorithm - Python
Self-developed an AI to determine a disease based on a provided symptoms list. Currently predicts 41 common diseases using 131 distinct symptoms.

- Developed a disease prediction model that achieved 96% accuracy by combining an ensemble of XGBoost, SVM, and ReLu models. Benchmarked model performance against a deep neural network to ensure robustness and model reliability

EXPERIENCE

AI Model Review Specialist 01/2024 - Present
Outlier.AI | Remote | Current

- Reviews and flags critical errors in logic and generated code in large language model outputs, enhancing model precision and alignment with user expectations.

Private Tutor and Esports Coach 06/2022 - 09/2023

- Led personalized tutoring sessions in Math and Physics for 10 students, strengthening foundational skills and boosting student confidence in subject mastery.
- Customized tutoring and coaching strategies to suit individual skill levels, resulting in an improvement of the student's performance.

Internship 06/2022 - 9/2022
Zen2050Maintenant Paris

- Developed and implemented interactive exhibition stands for Zen2050's annual event, creating eco-conscious games, climate-themed art, and educational activities that engaged visitors in sustainability initiatives.

ABOUT ME

As a student of engineering and medicine, my journey is deeply rooted in the intersection of medicine and technology.
Focusing on machine learning engineering, I am driven by a passion for the brain, neuroscience and artificial intelligence, leading me to the realms of brain-computer interfaces and neuro-engineering.
My work has spanned projects using Python, MATLAB, and C++ to explore data analysis, signal processing, and AI-driven solutions.

FIND ME ONLINE

Alex-Irae [link]

My Portfolio [link]

Alexandre CARMINOT [link]

SKILLS

Programming

Python - C++ - Java - Docker - Git

MATLAB - HTML, CSS & Javascript

Libraries

Tensorflow - Keras - MNE - Scikit

PyTorch - Seaborn - SciPy

Technical Skills

Machine Learning - Neurosciences

Deep Learning - CNN - NLP

Computer Vision

Engineering Skills

Problem Solving - Innovation - Analysis

Critical thinking - Device design

LANGUAGES

French Native, Voltaire Certification

English Expert, TOEIC (980/990)

Spanish Intermediate, B1

Chinese Elementrary, HSK3

PASSIONS & HOBBIES

- Martial Arts : Taekwondo (Red Belt), Judo (Brown Belt)
- Team sports : Rugby & Soccer
- Music : Piano (Playing for seven years)
- Science : Astronomy, Cosmology, Archaeology